Chapter 6, "On Medicinal Agents and their Classification," is a short one, and contains nothing worthy of special notice.

Chapter 7, is "On the Divine Dispensation in Disease." There is much that is valuable and interesting in it, but we do not see that it is exactly pertinent to the avowed object of the book. Indeed, there is much in the volume that gives it, as we may say, a patchwork character.

We are much surprised at one opinion which the author expresses. He says of cancer, encephaloid tubercle, and melanosis, that "it is questionable whether the plan of treatment pursued by the quack with these latter is not sometimes the most efficacious, destroying their vitality by powerful escharotics, and causing them to drop out, rather than our method of extirpation by the knife."

In the last chapter, which is on pseudo-medical science, some effectual blows are dealt upon phrenology, mesmerism, hydropathy, and homœopathy. We will give one or two specimens of his mode of treating the last named delusion:—

"To show nature's want of curative power, Hahnemann, most unhappily for himself, points out that 'it cannot bring together the gaping lips of a wound, and by their union effect a cure; it knows not how to straighten and adjust the broken ends of a bone; it cannot put a ligature on a wounded artery, but in its energy it causes the patient to bleed to death.' No, nor can it convey our meat and drink to our lips without our own mechanical effort. In the above instances, we see manifested, in a manner that in all ages has obtained the admiration of mankind, the consummate skill of nature. No, Hahnemann, we cannot give up this principle for your dogma; and you above all others ought not to require it, for without the *vis medicatrix naturæ*, what would your treatment be?"

It is thus that he brings the experience of the profession to bear as a full battery upon the exclusiveness of Hahnemannism. "We do not think it 'contrary to nature' to seek to cure disease by an open combat with it, by what Hahnemann terms antagonistic measures; so far holding the ancient maxim, *contraria contrariorum sunt remedia*. We apply cold to the hot head or skin in a frenzy or fever; a warm bath when the perspiration has been suppressed; we bleed in plethora or inflammation, and thus destroy the *pabulum* of disease, or in hemorrhage, to take off, by mechanical means, the *vis à tergo*; we give an alkali by a chemical law to neutralize the acid which may be proved to be present; purgatives in constipations; astringents in hemorrhage or diarrhœa; kousso in tapeworm; all wrong, according to Hahnemann. We have found that we can *citò, tutè et jucundè* relieve a colic by a carminative; a syncope by ammonia; a spasm by an opiate; or a gastralgia by a dose of brandy; and we adopt such methods, though they are deprecated by Hahnemann, as merely palliatives. In fact, we adhere to no dogma, neither the one given above, nor the opposite one of the homœopaths, viz., 'like cures like;' we avail ourselves of various laws and principles—our remedies may be vital, chemical, or mechanical; specific, derivative, or counter-irritant; diverse enough, at any rate, to prove that we are less systemists than the homœopaths themselves; a point on which they attack us."

W. H.

ART. XXVI.—*Etudes sur la Monorchidie et la Cryptorchidie chez l'Homme.* Par M. ERNEST GODARD, Interne des Hôpitaux de Paris, Membre de la Société de Biologie et de la Société Anatomique. Extrait des Mémoires de la Société de Biologie, année 1856. Paris, 1857. Octavo, pp. 164.

IN a recent number of this Journal (that for April, 1858), the last volume of the published minutes and memoirs of the Biological Society of Paris was briefly noticed. Attention was then called particularly to the great variety of subjects, in the study of which the members of that active society were engaged. It is an error, but a very common one, so much so that we feel called upon to refer to it, to suppose that the field allotted to the biologist in the domain of science is one of narrow limits. This error arises from a prevailing notion that when there is no longer life in an object, it is no longer an object for study to the biologist; and again, that any departure from the normal condition of things places a living

organized being beyond his legitimate field of research. This is not so, however; *biology*, meaning *life word*, everything connected with *vital phenomena* must be the object of the biologist's research. Biology does not mean simply the science of live animals, but the science of all organized beings in their two conditions, statical and dynamical, as fitted to act and as acting. Under the one condition, it comprises their organization or their anatomy, both normal and pathological, and the laws of their arrangement in natural groups, or biotaxy. Under the other condition, it comprises the influence of the medium in which the organized being is placed, or, in other words, the influence of exterior agents; and physiology, or the study of the functions of the organs.

The memoir which we are now called upon to notice has been extracted from the memoirs of the Biological Society of Paris for 1856, and published thus in a separate form. It is a work of very considerable importance, and contains information of value to the physician, in the several points of view of anatomy, of physiology, of pathology, and of legal jurisprudence.

The testicles, developed in the abdomen, descend gradually towards the scrotum, into which they fall at the ninth month of intra-uterine life. They may, however, be arrested in their course, and a temporary or a permanent anomaly be constituted, which has been called monorchidia, single-testicle, or cryptorchidia, hidden testicle, according as one or both of these spermatic organs are affected. It is then of these anomalies that the memoir of M. Godard treats. The anomaly that consists in the complete absence of one or of both testicles, of which undoubted examples have been reported, one of them in the twenty-third volume of this Journal (old series),[1] is not considered by him; he merely relates some facts for the purpose of showing that it is an anomaly really existing.

The researches of M. Godard go to show that monorchidia, which is the vice of conformation first treated of, is the result of an anatomical defect; of an error of diagnosis which has led to the application of a bandage for the purpose of retaining a hernia supposed to exist; or of a spasmodic contraction of the cremaster muscle.

The anatomical causes may belong to the testicle, to the gubernaculum testis, and to the pillars of the inguinal canal. Examination after death in the new-born child, has shown the testicle so swollen from inflammation that it could not pass through the abdominal ring; and moreover, the existence of a local peritonitis causing its adhesion to neighbouring organs. Lesions of the gubernaculum testis are, more often than is generally supposed, the primary causes of this vice of conformation. It is, most probably, owing to the contractions of the gubernaculum that the testicle descends from the place where it is first developed in the neighbourhood of the Wolffian bodies downwards to the scrotum. When the gubernaculum is completely wanting, the testicle remains where it was developed. The fibrous rings of the inguinal canal, above all the external, are sometimes so narrow as to prevent the descent of the testicle.

When a child has, in the inguinal region, a movable reducible tumour, the mistake is sometimes made of applying a truss, which will permanently prevent the passage of the testicle out of the abdominal cavity. This mistake is generally made by a bandagist, as M. Godard says; but very capable men may be supposed to make this mistake at times, from want of care in making the examination. In the October number of this Journal, for 1848, page 348, a case is reported by a fleet surgeon in the American navy, in which he had treated for some time an inflamed testicle situated in the inguinal canal as a strangulated hernia.

Spasmodic action of the cremaster muscle is very rarely the cause of monorchidia. M. Godard has been able to collect but two examples of it. In these cases the testicle, after its descent into the scrotum, was raised up again into the inguinal canal by the action of this muscle, and became fixed there.

In the numerous cases observed by M. Godard, 58 in number, in which one testicle had come down into the scrotum and the other not, sometimes both organs were healthy, at others one of them had undergone a change, and at

[1] In an article entitled, "Contributions illustrative of the Functions of the Cerebellum," by John D. Fisher, M. D., of Boston.

others again both were in a pathological condition. All these cases are, therefore, arranged in four great divisions, as follows:—

1st. The descended testicle and that of the opposite side arrested in its evolution are in the normal condition.

2d. The descended testicle is normal, that which has not descended being diseased.

3d. The descended testicle is in a pathological condition, that of the opposite side arrested in its evolution being healthy.

4th. Finally, both organs are diseased.

Each of these divisions offers some varieties according to the side where the anomaly has its seat, and the place in which the testicle has stopped. The diagnosis, the prognosis, the consecutive accidents, the pathological anatomy, the condition of the testicle, and the means to be adopted to facilitate its descent, in all these manifold varieties, are carefully and ably treated of. In the majority of these cases, the descended testicle was healthy; that is, it did not bear marks of disease. The examination made of its structure, however, showed that it was not performing its functions, that it was not acting as an organ of generation. When cut open, the gland had its normal colour, and its consistence was the same with that of the descended testicle. The seminiferous cones were arranged as in the normal condition, and no difference could be observed, by the aid of the microscope, in the canaliculi. The liquid extracted from the canaliculi did not contain any spermatozoa; only nuclear epithelium, globules of blood, and some fatty globules. Upon an examination of the epididymis, not a trace of spermatozoa could be seen in the liquid contained in the canaliculi, nothing but cylindrical epithelium. The seminal vesicle of the same side never contained spermatozoa.

In the absence of any other cause for the non-secretion of spermatozoa in the arrested testicle, and recollecting the fact that it is always fixed and motionless in the place it occupies, M. Godard concludes that the organ does not secrete because it does not possess the mobility it ought to have, and which it enjoys in the scrotum, where every moment it is subject to the contractions of the cremaster muscle.

The consequence of this capital fact is, that in cases where monorchidia exists the testicle in the scrotum is the only one that serves in generation.

It was an idea of the ancients, and it is still held by some persons, that the sex of the child depends upon the testicle that provides the semen by which the ovule is fecundated. Hippocrates, for example, says that, in order to have a girl, the man should tie the right testicle as firmly as he can bear it; to have a boy, he should tie the left.[1] Numerous observations recorded by M. Godard show that persons having but one testicle in the scrotum, consequently but one active organ, have children of either sex.

It being a matter then of the greatest importance that the testicle should descend into the scrotum, nothing should be neglected that could further its descent. The means recommended by M. Godard, as a general rule, are gymnastic exercises, swimming, and violent movements; of course, these means must be carefully watched and employed with discretion.

By cryptorchidia, M. Godard means that vice of conformation consisting in the absence of testicles in that portion of the integument that corresponds to the scrotum. This condition of things, very rare in men, constitutes, as is well known, the normal state of the greater number of animals. Its causes are identically the same as those of monorchidia. It cannot, however, be hereditary, as monorchidia sometimes is, unless it be in a family such as that of the Irishman, where it was hereditary not to have children. From the observations made by M. Godard, it is proven beyond a doubt, that men whose two testicles are arrested in their evolution are not impotent, but sterile.

The text of this memoir is illustrated by a large number of figures, and by three large lithograph plates.

By the manner in which the Biological Society of Paris issues its *Comptes Rendus* and *Memoirs*, it is well seen how well they appreciate the fact that *a*

[1] Littré's translation into French. Vol. viii. p. 501.

society is what it does, if we may so express ourselves. Judging of it in this way, we must look upon it to the medical man as one of the most important societies in the world. W. F. A.

ART. XXVII.—*On Amputation by a Long and a Short Rectangular Flap.* By THOMAS P. TEALE, F. L. S., F. R. C. S., Surgeon to the Leeds General Infirmary. Illustrated by engravings on wood by Mr. Bagg. London: Churchill, 1858. 8vo. pp. 72.

THE question as to the best mode of performing an amputation has ever been a somewhat unsettled one. Even at this day we can recognize in the surgical ranks the existence of two distinct parties—those who advocate the circular operation, and those who prefer to amputate by the method of single or double flaps.

Mr. Teale, the writer of the little volume before us, states, in his general remarks, that he has at different periods of his life practised both methods of operating. Finding, however, that neither of these were entirely free from certain objections, Mr. Teale has devised a plan of proceeding which affords, in his estimation, results of a much more satisfactory character than either of those ordinarily employed. In performing an amputation, the author cuts two flaps, both of these being of a perfectly rectangular shape. The two flaps, however, vary much in size; the external one, as a general rule, being four times the length of the internal and shorter one. The vessels and nerves of the limb are always to be comprised in the lesser flap. When the flaps are cut, the long one—equal in length and breadth to one-half the circumference of the limb, and consequently a perfect square—is allowed to fall easily over the end of the bone; its lower extremity is then brought up, and united by points of suture with the angles and extremity of the short flap. A stitch or two is also inserted, in order to unite the reflected with the unreflected portion of the greater flap. It must be observed, also, that in making the dissections above described, care is taken to separate the soft parts from the bone, close to the periosteum, so as to preserve to the greatest extent the tissues necessary to form the pad or cushion of the stump.

The chief peculiarity of the operation, as thus described, will be seen to be the obtaining of a sufficiently large fleshy mass for the covering of the end of the bone. The stump thus formed will be of large size, soft, movable over the sawn end of bone, and devoid of all large vessels or nerves. It will, consequently, be well fitted to sustain the necessary amount of pressure; and the frequently occurring evils of a painful and irritable cicatrix will be by these means entirely obviated.

In order to substantiate the conclusions at which he has arrived, Mr. Teale presents us with the following summary of cases which have been operated upon by his new method:—

56 AMPUTATIONS . . (From June 16, 1855, to June 16, 1858.)	Thigh,	18.	Accident,	1.	Death,	0.
					Recovery,	1.
			Disease,	17.	Deaths,	3.
					Recoveries,	14.
	Leg,	28.	Accident,	1.	Death,	0.
					Recovery,	1.
			Disease,	27.	Death,	1.
					Recoveries,	26.
	Arm,	6.	Accident,	3.	Death,	1.
					Recoveries,	2.
			Disease,	3.	Deaths,	2.
					Recovery,	1.
	Forearm,	4.	Accident,	1.	Death,	0.
					Recovery,	1.
			Disease,	3.	Death,	0.
					Recoveries,	3.